cdfa CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE
A. G. Kawamura, Secretary

May 9, 2008

Dr. Dennis Knepp
P.O. Box 1014
Monterey, CA 93942

Dr. Jeff Haferman
P.O. Box 30
Monterey, CA 93942

RE: Your letter dated May 8, 2008

Dear Drs. Knepp and Haferman:

After sending you my first response to your letter of April 16, I have had the opportunity to discuss it in more depth with some of my colleagues. Based on their input, I would like to update the section of my previous letter about the 'worst case' scenario exposure to $PM_{10}$ particles.

Here is the relevant section of my previous letter:

> "Assume that 100 percent of the microcapsules are distributed evenly in the lower 3 meters air column and none of the $PM_{10}$ micro-capsules are in water droplets. Given that the pheromone application rate is 15 g/acre, polyurea application rate. 3 g/acre and one acre = 4046.7 meter squared, then:
>
> 1.2% * 18 g/acre * $10^6$ micrograms/g / 4046.7 $m^2$/acre/ 3 m = 18 micrograms/$m^3$
>
> This "worst scenario" is 12 percent of the 24-hour national standard for $PM_{10}$ and it is also only 36 percent of the more conservative [California] standard."

My colleagues have pointed out that the national standard for $PM_{10}$ is for an average exposure over 24 hours. As most of the Checkmate particles (99.9 percent by count) are larger than 4.578 micrometers in diameter, they will settle out of the bottom three meters of the air column within two hours. This means exposure to the Checkmate $PM_{10}$ particles would last for at most two hours, and there should be very little exposure after that. To calculate the 'worst case' scenario, the estimation calculated above (18 micrograms/$m^3$) needs to be divided by a factor of 12.



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Therefore my new 'worst case' scenario follows:

$1.2\% * 18$ g/acre $* 10^6$ micrograms/g / 4046.7 $m^2$/acre/ 3 m/ 12 = 1.5 micrograms/$m^3$

This level is only one percent of the 24-hour national standard or three percent of the more conservative California standard.

Considering that both the national standard and the California standard are based on exposure to particulate matter from primarily combustion sources, such as diesel engines, it is not appropriate to attempt to use these standards to estimate an increase in mortality from Checkmate particles.

I repeat my conclusion that the CDFA met applicable $PM_{10}$ safety standards with its LBAM applications.

Sincerely,

Robert Leavitt, Ph.D.
Branch Chief